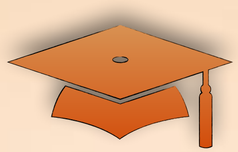
The Complete C# Developer Course



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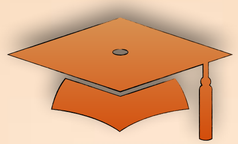
The Fundamentals of C# Part 2



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The Fundamentals of C# Part 2

Data types in-depth

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Data types in-depth

Name	.NET Type	Size	Range
sbyte	System.SByte	1 byte	-128 to 127
byte	System.Byte	1 byte	0 to 255
short	System.Int16	2 bytes	-32,768 to 32,767
ushort	System.UInt16	2 bytes	0 to 65,535
int	System.Int32	4 bytes	-2,147,483,648 to 2,147,483,647
uint	System.UInt32	4 bytes	0 to 4,294,967,295
long	System.Int64	8 bytes	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807
ulong	System.UInt64	8 bytes	0 to 18,446,744,073,709,551,615

The Fundamentals of C# Part 2

Float, Double and Decimal

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Float, Double and Decimal

Name	.NET Type	Size	Precision	Range
float	System.Single	4 bytes	7 digits	1.5×10^{-45} to 3.4×10^{38}
double	System.Double	8 bytes	15-16 digits	5.0×10^{-324} to 1.7×10^{308}
decimal	System.Decimal	16 bytes	28-29 decimal places	1.0×10^{-28} to 7.9×10^{28}

The Fundamentals of C# Part 2

DateTime exercise

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DateTime exercise

First format : **30-09-2017 09:09:59**

Second format : **Friday of month September year 2017**

Third format : **Day Friday**

Month September

Year 2017

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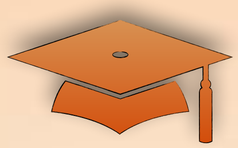

Errors Types

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Errors Types

Syntax Errors

Run-time Errors (Exceptions)

Logical Errors

The Fundamentals of C# Part 2

Naming conventions

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Naming conventions

I Love Programming

Camel case : iLoveProgramming

Pascal or upper camel case : ILoveProgramming

Underscore or snake Case : i_love_programming

Kebab case : i-love-programming

First Name

Camel case : firstName

Pascal or upper camel case : FirstName

Underscore or snake Case : first_name

Kebab case : first-name

Arithmetic operators

✓ **Do** choose easily readable identifier names. (*HorizontalAlignment* more english than *AlignmentHorizontal*).

✓ **Do** favor readability over brevity. (*GetProductCode* is better than *GetProCod*).

X **Avoid** using identifiers that conflict with keywords of widely used programming languages.

X **Avoid** using numbers and special symbols like ? ~ -

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Arithmetic operators

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Arithmetic Operations

Addition (+) ***ex. 1 + 1 = 2***

Subtraction (-) ***ex. 3 - 1 = 2***

Multiplication (*) ***ex. 2 * 2 = 4***

Division (/) ***ex. 6 / 3 = 2***

Remainder (%) e*x. 7 % 3 = 1 or 19 % 5 = 4*

Arithmetic Operations

Remainder **is the amount left over after division**

19 / 5

19 cannot be divided exactly by 5

The closest you can get without going over is 3 x 5 = 15, which is 4 less than 19

So 4 is the remainder

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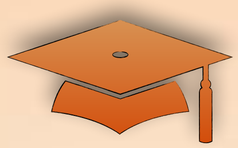

Arithmetic operators exercise

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Arithmetic operations exercise

5 + 2 = 7

5 - 2 = 3

5 * 2 = 10

5 / 2 = 2.5

5 % 2 = 1

The Fundamentals of C# Part 2

Precedence of operators

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Precedence of operators

```
2 + 3 * 2 - 4 + 2
```

Precedence of operators

2 + 3 * 2 - 4 + 2

5 * 2 - 4 + 2

10 - 4 + 2

6 + 2

8

2 + 3 * 2 - 4 + 2

2 + 6 - 4 + 2

8 - 4 + 2

4 + 2

6

Precedence of operators

( )

* /

+ -

=

The Fundamentals of C# Part 2

Comparison operators

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Comparison operators

== equal

!= not equal

> greater than

< less than

>= greater than or equal to

<= less than or equal to

The Fundamentals of C# Part 2

Logical operators

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Logical operators

Condition X	Condition Y	AND	OR
true	true	true	true
true	false	false	true
false	true	false	true
false	false	false	false

AND

Learn to drive	Get license	Get to drive in streets
true	true	true
true	false	false
false	true	false
false	false	false

OR

Take a shower	Go for a swim	Get wet
true	true	true
true	false	true
false	true	true
false	false	false

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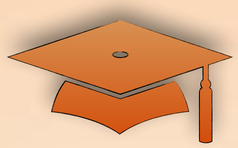

More logical Operators

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More logical operators

Username or Email and Password

More logical operators

Username (OR)	Email (OR)	Password (AND)	Result
1	1	1	valid
1	1	0	not valid
1	0	1	valid
0	1	1	valid
1	0	0	not valid
0	1	0	not valid
0	0	1	not valid
0	0	0	not valid

The Fundamentals of C# Part 2

Even or odd exercise

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Even or odd exercise

Even numbers : 0,2,4,6,8,10,12,14

Odd numbers : 1,3,5,7,9,11,13,15

Tip:

Evenly divisible by 2

No Remainder

Even or odd exercise

Evenly divisible by 2

No Remainder

The Fundamentals of C# Part 2

Assignments

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Assignments

Assignment No.1: (Friendly conversation with C#)

C#: what is your name?
Ronaldo
C#: Nice to meet you Ronaldo My name is C#, How old are you?
30 // check if the input from user is int or not
30 good, As for me I was born on 2002 which makes me 15 years old

Assignments

Assignment No.2: (Time Machine)

Develop an app which takes a date (birthday, marriage date for ex.) and it shall tell you which day of the week it was.

Enter the day..
10
Enter the month..
10
Enter the year..
1988
This day should be Monday

Assignments

Assignment No.3: (Weekdays and Colors)

Develop an app which takes the today date and assign the color based on the below table using switch statement.

Saturday : Yellow
Sunday : Green
Monday : Blue
Tuesday : Grey
Wednesday : Red
Thursday : Orange
Friday : White